

WHAT IS CLAIMED IS:

1. A method for compressing data for transmission to a recipient, said method comprising:
transforming said data into at least two components, said recipient tolerant of variations in
5 one of said components; and
transmitting a compressed representation of said one of said components.
2. The method of claim 1 wherein said compressed representation indicates a relative value of a current sample of said one of said components as compared to a related sample of said one of said
5 components.
3. The method of claim 2 wherein said related sample is a previous sample.
4. The method of claim 2 wherein said previous sample is an immediately preceding sample.
5. The method of claim 4 wherein said relative value is one of (a) no change, (b) an increase by a predetermined increment, and (c) a decrease by said predetermined increment.
6. The method of claim 5 wherein said relative value is represented by one bit.
7. The method of claim 6 wherein said one of said components is phase.

8. The method of claim 7 wherein said transforming comprises applying a Fourier transformation.

9. The method of claim 8 wherein said data represent sound.

10. The method of claim 9 wherein said sound is speech.

11. The method of claim 7 wherein said data represent sound.

12. The method of claim 11 wherein said sound is speech.

13. The method of claim 2 wherein said related sample is a subsequent sample.

14. The method of claim 13 wherein said relative value is one of (a) no change, (b) an increase by a predetermined increment, and (c) a decrease by said predetermined increment.

15. The method of claim 14 wherein said relative value is represented by one bit.

16. The method of claim 15 wherein said one of said components is phase.

17. The method of claim 16 wherein said transforming comprises applying a Fourier transformation.

18. The method of claim 17 wherein said data represent sound.

19. The method of claim 18 wherein said sound is speech.

20. The method of claim 16 wherein said data represent sound.

21. The method of claim 20 wherein said sound is speech.

22. The method of claim 3 wherein said relative value is one of (a) no change, (b) an increase by a predetermined increment, and (c) a decrease by said predetermined increment.

23. The method of claim 22 wherein said relative value is represented by one bit.

24. The method of claim 23 wherein said one of said components comprises phase.

25. The method of claim 24 wherein said transforming comprises applying a Fourier transformation.

26. The method of claim 25 wherein said data represent sound.

27. The method of claim 26 wherein said sound is speech.

28. The method of claim 24 wherein said data represent sound.

29. The method of claim 28 wherein said sound is speech.

30. The method of claim 2 wherein said relative value is one of (a) no change, (b) an increase by a predetermined increment, and (c) a decrease by said predetermined increment.

31. The method of claim 30 wherein said relative value is represented by one bit.

32. The method of claim 31 wherein said one of said components comprises phase.

33. The method of claim 32 wherein said transforming comprises applying a Fourier transformation.

34. The method of claim 33 wherein said data represent sound.

35. The method of claim 34 wherein said sound is speech.

36. The method of claim 32 wherein said data represent sound.

37. The method of claim 36 wherein said sound is speech.

38. The method of claim 1 wherein said one of said components comprises phase.

39. The method of claim 38 wherein said transforming comprises applying a Fourier transformation.

40. The method of claim 39 wherein said data represent sound.

41. The method of claim 40 wherein said sound is speech.

42. The method of claim 38 wherein said data represent sound.

43. The method of claim 42 wherein said sound is speech.

44. The method of claim 1 wherein said transforming comprises applying a Fourier transformation.

45. The method of claim 44 wherein said data represent sound.

46. The method of claim 45 wherein said sound is speech.

47. The method of claim 1 wherein:
said recipient is sensitive to
variations in another of said components; and
said method further comprises:
5 transmitting said another of said
components at least substantially in its entirety.

48. The method of claim 47 wherein said one of said components is phase.

49. The method of claim 48 wherein said another of said components comprises amplitude.

50. The method of claim 49 wherein said compressed representation indicates a relative value of a current sample of said one of said components as compared to a related sample of said one of said
5 components.

51. The method of claim 50 wherein said related sample is a subsequent sample.

52. The method of claim 51 wherein said relative value is one of (a) no change, (b) an increase by a predetermined increment, and (c) a decrease by said predetermined increment.

53. The method of claim 52 wherein said relative value is represented by one bit.

54. The method of claim 53 wherein said one of said components is phase.

55. The method of claim 54 wherein said transforming comprises applying a Fourier transformation.

56. The method of claim 55 wherein said data represent sound.

57. The method of claim 56 wherein said sound is speech.

58. The method of claim 54 wherein said data represent sound.

59. The method of claim 58 wherein said sound is speech.

60. The method of claim 50 wherein said related sample is a previous sample.

61. The method of claim 60 wherein said previous sample is an immediately preceding sample.

62. The method of claim 61 wherein said relative value is one of (a) no change, (b) an increase by a predetermined increment, and (c) a decrease by said predetermined increment.

63. The method of claim 62 wherein said relative value is represented by one bit.

64. The method of claim 63 wherein said transforming comprises applying a Fourier transformation.

65. The method of claim 64 wherein said data represent sound.

66. The method of claim 65 wherein said sound is speech.

67. The method of claim 64 wherein said data represent sound.

68. The method of claim 67 wherein said sound is speech.

69. The method of claim 60 wherein said relative value is one of (a) no change, (b) an increase by a predetermined increment, and (c) a decrease by said predetermined increment.

70. The method of claim 69 wherein said relative value is represented by one bit.

71. The method of claim 70 wherein said transforming comprises applying a Fourier transformation.

72. The method of claim 71 wherein said data represent sound.

73. The method of claim 72 wherein said sound is speech.

74. The method of claim 70 wherein said data represent sound.

75. The method of claim 74 wherein said sound is speech.

76. The method of claim 50 wherein said relative value is one of (a) no change, (b) an increase by a predetermined increment, and (c) a decrease by said predetermined increment.

77. The method of claim 76 wherein said relative value is represented by one bit.

78. The method of claim 77 wherein said transforming comprises applying a Fourier transformation.

79. The method of claim 78 wherein said data represent sound.

80. The method of claim 79 wherein said sound is speech.

81. The method of claim 78 wherein said data represent sound.

82. The method of claim 81 wherein said sound is speech.

83. The method of claim 49 wherein said transforming comprises applying a Fourier transformation.

84. The method of claim 83 wherein said data represent sound.

85. The method of claim 84 wherein said sound is speech.

86. The method of claim 83 wherein:
said one of said components is
represented by a first number of bits; and
said another of said components is
5 represented by a second number of bits greater than
said first number of bits.

87. The method of claim 86 wherein said first number of bits is one.

88. The method of claim 48 wherein said transforming comprises applying a Fourier transformation.

89. The method of claim 88 wherein said data represent sound.

90. The method of claim 89 wherein said sound is speech.

91. The method of claim 88 wherein:
said one of said components is
represented by a first number of bits; and
said another of said components is
5 represented by a second number of bits greater than
said first number of bits.

92. The method of claim 91 wherein said first number of bits is one.

93. The method of claim 48 wherein said compressed representation indicates a relative value of a current sample of said one of said components as compared to a related sample of said one of said
5 components.

94. The method of claim 93 wherein said previous sample is an immediately preceding sample.

95. The method of claim 94 wherein said relative value is one of (a) no change, (b) an increase by a predetermined increment, and (c) a decrease by said predetermined increment.

96. The method of claim 95 wherein said relative value is represented by one bit.

97. The method of claim 96 wherein said one of said components is phase.

98. The method of claim 97 wherein said transforming comprises applying a Fourier transformation.

99. The method of claim 98 wherein said data represent sound.

100. The method of claim 99 wherein said sound is speech.

101. The method of claim 97 wherein said data represent sound.

102. The method of claim 101 wherein said sound is speech.

103. The method of claim 93 wherein said related sample is a previous sample.

104. The method of claim 103 wherein said previous sample is an immediately preceding sample.

105. The method of claim 104 wherein said relative value is one of (a) no change, (b) an increase by a predetermined increment, and (c) a decrease by said predetermined increment.

106. The method of claim 105 wherein said relative value is represented by one bit.

107. The method of claim 106 wherein said transforming comprises applying a Fourier transformation.

108. The method of claim 107 wherein said data represent sound.

109. The method of claim 108 wherein said sound is speech.

110. The method of claim 106 wherein said data represent sound.

111. The method of claim 110 wherein said sound is speech.

112. The method of claim 103 wherein said relative value is one of (a) no change, (b) an increase by a predetermined increment, and (c) a decrease by said predetermined increment.

113. The method of claim 112 wherein said relative value is represented by one bit.

114. The method of claim 113 wherein said transforming comprises applying a Fourier transformation.

115. The method of claim 114 wherein said data represent sound.

116. The method of claim 115 wherein said sound is speech.

117. The method of claim 113 wherein said data represent sound.

118. The method of claim 117 wherein said sound is speech.

119. The method of claim 93 wherein said relative value is one of (a) no change, (b) an increase by a predetermined increment, and (c) a decrease by said predetermined increment.

120. The method of claim 119 wherein said relative value is represented by one bit.

121. The method of claim 120 wherein said transforming comprises applying a Fourier transformation.

122. The method of claim 121 wherein said data represent sound.

123. The method of claim 122 wherein said sound is speech.

124. The method of claim 120 wherein said data represent sound.

125. The method of claim 124 wherein said sound is speech.

126. The method of claim 47 wherein said compressed representation indicates a relative value of a current sample of said one of said components as compared to a related sample of said one of said components.
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127. The method of claim 126 wherein said related sample is a subsequent sample.

128. The method of claim 127 wherein said relative value is one of (a) no change, (b) an increase by a predetermined increment, and (c) a decrease by said predetermined increment.

129. The method of claim 128 wherein said relative value is represented by one bit.

130. The method of claim 129 wherein said one of said components is phase.

131. The method of claim 130 wherein said transforming comprises applying a Fourier transformation.

132. The method of claim 131 wherein said data represent sound.

133. The method of claim 132 wherein said sound is speech.

134. The method of claim 130 wherein said data represent sound.

135. The method of claim 134 wherein said sound is speech.

136. The method of claim 126 wherein said related sample is a previous sample.

137. The method of claim 136 wherein said previous sample is an immediately preceding sample.

138. The method of claim 137 wherein said relative value is one of (a) no change, (b) an increase by a predetermined increment, and (c) a decrease by said predetermined increment.

139. The method of claim 138 wherein said relative value is represented by one bit.

140. The method of claim 139 wherein said transforming comprises applying a Fourier transformation.

141. The method of claim 140 wherein said data represent sound.

142. The method of claim 141 wherein said sound is speech.

143. The method of claim 139 wherein said data represent sound.

144. The method of claim 143 wherein said sound is speech.

145. The method of claim 136 wherein said relative value is one of (a) no change, (b) an increase by a predetermined increment, and (c) a decrease by said predetermined increment.

146. The method of claim 145 wherein said relative value is represented by one bit.

147. The method of claim 146 wherein said transforming comprises applying a Fourier transformation.

148. The method of claim 147 wherein said data represent sound.

149. The method of claim 148 wherein said sound is speech.

150. The method of claim 146 wherein said data represent sound.

151. The method of claim 150 wherein said sound is speech.

152. The method of claim 126 wherein said relative value is one of (a) no change, (b) an increase by a predetermined increment, and (c) a decrease by said predetermined increment.

153. The method of claim 152 wherein said relative value is represented by one bit.

154. The method of claim 153 wherein said transforming comprises applying a Fourier transformation.

155. The method of claim 154 wherein said data represent sound.

156. The method of claim 155 wherein said sound is speech.

157. The method of claim 153 wherein said data represent sound.

158. The method of claim 157 wherein said sound is speech.

159. The method of claim 47 wherein said transforming comprises applying a Fourier transformation.

160. The method of claim 159 wherein said data represent sound.

161. The method of claim 160 wherein said sound is speech.

162. The method of claim 159 wherein:

said one of said components is
represented by a first number of bits; and

said another of said components is
5 represented by a second number of bits greater than
said first number of bits.

163. The method of claim 162 wherein said
first number of bits is one.

164. The method of claim 47 wherein:

said one of said components is
represented by a first number of bits; and

said another of said components is
5 represented by a second number of bits greater than
said first number of bits.

165. The method of claim 164 wherein said
first number of bits is one.

166. A method of compressing primary data and
transmitting resultant compressed data to a recipient,
said method comprising:

converting said primary data into
5 secondary data; wherein:

said secondary data representing at
least two components;

said recipient is relatively more
tolerant of variations in one of said components as
10 compared with variations in another of said components;
and

said secondary data representing said
one of said components is a relatively compressed

representation as compared with said secondary data
15 representing said another of said components; said
method further comprising:
transmitting said secondary data to said
recipient.

167. The method of claim 166 wherein said one
of said components is phase.

168. The method of claim 167 wherein said
another of said components comprises amplitude.

169. The method of claim 168 wherein said
compressed representation indicates a relative value of
a current sample of said one of said components as
compared to a related sample of said one of said
5 components.

170. The method of claim 169 wherein said
related sample is a subsequent sample.

171. The method of claim 170 wherein said
relative value is one of (a) no change, (b) an increase
by a predetermined increment, and (c) a decrease by
said predetermined increment.

172. The method of claim 171 wherein said
relative value is represented by one bit.

173. The method of claim 172 wherein said one
of said components is phase.

174. The method of claim 173 wherein said converting comprises applying a Fourier transformation.

175. The method of claim 174 wherein said data represent sound.

176. The method of claim 175 wherein said sound is speech.

177. The method of claim 173 wherein said data represent sound.

178. The method of claim 177 wherein said sound is speech.

179. The method of claim 169 wherein said related sample is a previous sample.

180. The method of claim 179 wherein said previous sample is an immediately preceding sample.

181. The method of claim 180 wherein said relative value is one of (a) no change, (b) an increase by a predetermined increment, and (c) a decrease by said predetermined increment.

182. The method of claim 181 wherein said relative value is represented by one bit.

183. The method of claim 182 wherein said converting comprises applying a Fourier transformation.

184. The method of claim 183 wherein said data represent sound.

185. The method of claim 184 wherein said sound is speech.

186. The method of claim 183 wherein said data represent sound.

187. The method of claim 186 wherein said sound is speech.

188. The method of claim 179 wherein said relative value is one of (a) no change, (b) an increase by a predetermined increment, and (c) a decrease by said predetermined increment.

189. The method of claim 188 wherein said relative value is represented by one bit.

190. The method of claim 189 wherein said converting comprises applying a Fourier transformation.

191. The method of claim 190 wherein said data represent sound.

192. The method of claim 191 wherein said sound is speech.

193. The method of claim 189 wherein said data represent sound.

194. The method of claim 193 wherein said sound is speech.

195. The method of claim 169 wherein said relative value is one of (a) no change, (b) an increase by a predetermined increment, and (c) a decrease by said predetermined increment.

196. The method of claim 195 wherein said relative value is represented by one bit.

197. The method of claim 196 wherein said converting comprises applying a Fourier transformation.

198. The method of claim 197 wherein said data represent sound.

199. The method of claim 198 wherein said sound is speech.

200. The method of claim 197 wherein said data represent sound.

201. The method of claim 200 wherein said sound is speech.

202. The method of claim 168 wherein said converting comprises applying a Fourier transformation.

203. The method of claim 202 wherein said data represent sound.

204. The method of claim 203 wherein said sound is speech.

205. The method of claim 202 wherein:
said one of said components is
represented by a first number of bits; and
said another of said components is
5 represented by a second number of bits greater than
said first number of bits.

206. The method of claim 205 wherein said first number of bits is one.

207. The method of claim 167 wherein said converting comprises applying a Fourier transformation.

208. The method of claim 207 wherein said data represent sound.

209. The method of claim 208 wherein said sound is speech.

210. The method of claim 207 wherein:
said one of said components is
represented by a first number of bits; and
said another of said components is
5 represented by a second number of bits greater than
said first number of bits.

211. The method of claim 210 wherein said first number of bits is one.

212. The method of claim 167 wherein said compressed representation indicates a relative value of a current sample of said one of said components as compared to a related sample of said one of said components.

213. The method of claim 212 wherein said previous sample is an immediately preceding sample.

214. The method of claim 213 wherein said relative value is one of (a) no change, (b) an increase by a predetermined increment, and (c) a decrease by said predetermined increment.

215. The method of claim 214 wherein said relative value is represented by one bit.

216. The method of claim 215 wherein said one of said components is phase.

217. The method of claim 216 wherein said converting comprises applying a Fourier transformation.

218. The method of claim 217 wherein said data represent sound.

219. The method of claim 218 wherein said sound is speech.

220. The method of claim 216 wherein said data represent sound.

221. The method of claim 220 wherein said sound is speech.

222. The method of claim 212 wherein said related sample is a previous sample.

223. The method of claim 222 wherein said previous sample is an immediately preceding sample.

224. The method of claim 223 wherein said relative value is one of (a) no change, (b) an increase by a predetermined increment, and (c) a decrease by said predetermined increment.

225. The method of claim 224 wherein said relative value is represented by one bit.

226. The method of claim 225 wherein said converting comprises applying a Fourier transformation.

227. The method of claim 226 wherein said data represent sound.

228. The method of claim 227 wherein said sound is speech.

229. The method of claim 225 wherein said data represent sound.

230. The method of claim 229 wherein said sound is speech.

231. The method of claim 222 wherein said relative value is one of (a) no change, (b) an increase by a predetermined increment, and (c) a decrease by said predetermined increment.

232. The method of claim 231 wherein said relative value is represented by one bit.

233. The method of claim 232 wherein said converting comprises applying a Fourier transformation.

234. The method of claim 233 wherein said data represent sound.

235. The method of claim 234 wherein said sound is speech.

236. The method of claim 232 wherein said data represent sound.

237. The method of claim 236 wherein said sound is speech.

238. The method of claim 212 wherein said relative value is one of (a) no change, (b) an increase by a predetermined increment, and (c) a decrease by said predetermined increment.

239. The method of claim 238 wherein said relative value is represented by one bit.

240. The method of claim 239 wherein said converting comprises applying a Fourier transformation.

241. The method of claim 240 wherein said data represent sound.

242. The method of claim 241 wherein said sound is speech.

243. The method of claim 239 wherein said data represent sound.

244. The method of claim 243 wherein said sound is speech.

245. The method of claim 166 wherein said compressed representation indicates a relative value of a current sample of said one of said components as compared to a related sample of said one of said
5 components.

246. The method of claim 245 wherein said related sample is a subsequent sample.

247. The method of claim 246 wherein said relative value is one of (a) no change, (b) an increase by a predetermined increment, and (c) a decrease by said predetermined increment.

248. The method of claim 247 wherein said relative value is represented by one bit.

249. The method of claim 248 wherein said one of said components is phase.

250. The method of claim 249 wherein said converting comprises applying a Fourier transformation.

251. The method of claim 250 wherein said data represent sound.

252. The method of claim 251 wherein said sound is speech.

253. The method of claim 249 wherein said data represent sound:

254. The method of claim 253 wherein said sound is speech.

255. The method of claim 245 wherein said related sample is a previous sample.

256. The method of claim 255 wherein said previous sample is an immediately preceding sample.

257. The method of claim 256 wherein said relative value is one of (a) no change, (b) an increase by a predetermined increment, and (c) a decrease by said predetermined increment.

258. The method of claim 257 wherein said relative value is represented by one bit.

259. The method of claim 258 wherein said converting comprises applying a Fourier transformation.

260. The method of claim 259 wherein said data represent sound.

261. The method of claim 260 wherein said sound is speech.

262. The method of claim 258 wherein said data represent sound.

263. The method of claim 262 wherein said sound is speech.

264. The method of claim 255 wherein said relative value is one of (a) no change, (b) an increase by a predetermined increment, and (c) a decrease by said predetermined increment.

265. The method of claim 264 wherein said relative value is represented by one bit.

266. The method of claim 265 wherein said converting comprises applying a Fourier transformation.

267. The method of claim 266 wherein said data represent sound.

268. The method of claim 267 wherein said sound is speech.

269. The method of claim 265 wherein said data represent sound.

270. The method of claim 269 wherein said sound is speech.

271. The method of claim 245 wherein said relative value is one of (a) no change, (b) an increase by a predetermined increment, and (c) a decrease by said predetermined increment.

272. The method of claim 271 wherein said relative value is represented by one bit.

273. The method of claim 272 wherein said converting comprises applying a Fourier transformation.

274. The method of claim 273 wherein said data represent sound.

275. The method of claim 274 wherein said sound is speech.

276. The method of claim 272 wherein said data represent sound.

277. The method of claim 276 wherein said sound is speech.

278. The method of claim 166 wherein said converting comprises applying a Fourier transformation.

279. The method of claim 278 wherein said data represent sound.

280. The method of claim 279 wherein said sound is speech.

281. The method of claim 278 wherein:
said one of said components is
represented by a first number of bits; and
said another of said components is
5 represented by a second number of bits greater than
said first number of bits.

282. The method of claim 281 wherein said first number of bits is one.

283. The method of claim 166 wherein:
said one of said components is
represented by a first number of bits; and
said another of said components is
5 represented by a second number of bits greater than
said first number of bits.

284. The method of claim 283 wherein said first number of bits is one.